INDEX OF AUTHORS AND PAPERS

Albanesi, E.A. and Passeggi, M.C.G., The role of conduction electrons on the crystal field effect in metallic systems 159 (1989) 289
Axe, J.D., see Bohr, J. 159 (1989) 93

Bar'yakhtar, V.G., Crystal symmetry and the structure of the relaxation terms in the dynamic equations of motion for magnetization 159 (1989) 20
Bezrukov, S.M., Pustovoit, M.A., Sibilev, A.I. and Drabkin, G.M., Large-scale conductance fluctuations in solutions of strong electrolytes 159 (1989) 388
Bohr, J., Gibbs, D., Axe, J.D., Moncton, D.E., D'Amico, K.L., Majkrzak, C.F., Kwo, J., Hong, M., Chien, C.L. and Jensen, J., Diffraction studies of rare earth metals and superlattices 159 (1989) 93
Borchers, J., see Rhyne, J.J. 159 (1989) 111
Borkowski, L., see Harań, G. 159 (1989) 223
Borman, V.D., Pivovarov, A.N. and Troyan, V.I., The kinetic equation for the activated process on the surface of a slowly relaxing solid 159 (1989) 402
Brocken, M.G.M. and Van Beelen, H., The use of isothermal third sound oscillators for the study of ^{4}He films 159 (1989) 191
Burlet, P., Quezel, S., Rossat-Mignod, J., Spirlet, J.C., Rebizant, J. and Vogt, O., Neutron scattering studies of neptunium and plutonium compounds 159 (1989) 129
Buschow, K.H.J., see Radwański, R.J. 159 (1989) 311

Chien, C.L., see Bohr, J. 159 (1989) 93
Chovet, A., see Dimopoulos, G. 159 (1989) 219
Colinet, C. and Pasturel, A., Effective pair interactions and order in bcc binary transition metal alloys 159 (1989) 275
Comas, F. and Mora-Ramos, M.E., Polaron effect in single semiconductor heterostructures 159 (1989) 413
Cooper, M.J., Magnetic Compton scattering with circularly polarised synchrotron radiation 159 (1989) 137
Czaplicki, J., Weiden, N. and Weiss, A., Electron spin–lattice relaxation via PMR in $Co(NH_3)_6X_2$ type compounds 159 (1989) 214

D'Amico, K.L., see Bohr, J. 159 (1989) 93
De Boer, F.R., see Radwański, R.J. 159 (1989) 311
De Bruyn Ouboter, R. and De Wolff, E., On the thermodynamics of a superconducting ring interrupted by a weak superconducting junction II (continuation) 159 (1989) 234
De Wolff, E., see De Bruyn Ouboter, R. 159 (1989) 234
Dimopoulos, G. and Chovet, A., $1/f$ noise investigations in double-injection gated SOS structures 159 (1989) 219
Drabkin, G.M., see Bezrukov, S.M. 159 (1989) 388
Du, R., see Rhyne, J.J. 159 (1989) 111

Elkorashy, A.M., Optical constants of germanium sulphide single crystal by interference method 159 (1989) 171
Erwin, R.W., see Rhyne, J.J. 159 (1989) 111

Fain, B. and Gortel, Z.W., Generalized master equation for photodesorption by resonant IR laser–adsorbate vibrational coupling 159 (1989) 361
Fatima, N., see Srivastava, K.S. 159 (1989) 295
Fawcett, E., Magnetic Grüneisen parameters in 3d transition metals 159 (1989) 12
Fenton, E.W., Review of high temperature superconductivity 159 (1989) 1
Flynn, C.P., see Rhyne, J.J. 159 (1989) 111
Franse, J.J.M., see Maślanka, R. 159 (1989) 181
Franse, J.J.M., see Radwański, R.J. 159 (1989) 311
Fulde, P., Electron correlations in transition metals 159 (1989) 50

Gibbs, D., Polarization analysis of magnetic X-ray scattering 159 (1989) 145
Gibbs, D., see Bohr, J. 159 (1989) 93
Gortel, Z.W., see Fain, B. 159 (1989) 361
Grebennikov, V.I., see Turov, E.A. 159 (1989) 56
Grimvall, G., Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten 159 (1989) 39
Gupta, H.C., Sood, G., Sinha, M.M. and Tripathi, B.B., Two-mode behaviour in mixed layer crystals $HfS_{2-x}Te_x (0 \leqslant x \leqslant 2)$ 159 (1989) 383

Hannon, J.P. and Trammell, G.T., Coherent excitations of nuclei in crystals by synchrotron radiation pulses 159 (1989) 161
Harań, G., Jacak, L. and Borkowski, L., On the gapless superfluidity in ^{3}He films 159 (1989) 223
Henkie, Z., see Maślanka, R. 159 (1989) 181
Hong, M., see Bohr, J. 159 (1989) 93

Iwamatsu, M., On the calculation of the thermodynamics of liquid metals using the charged-hard-sphere reference system 159 (1989) 269

Jacak, L., see Harań, G. 159 (1989) 223
Jensen, J., see Bohr, J. 159 (1989) 93

Katsnelson, M.I., see Vonsovsky, S.V. 159 (1989) 61
Kowalik, Z.J. and Stankowski, J., The bifurcations in the rf-SQUID system 159 (1989) 399
Krop, K., R–T intermetallics as seen by Mössbauer spectroscopy 159 (1989) 66
Kübler, J., Band structure calculations for magnetic and superconducting systems 159 (1989) 7
Kwo, J., see Bohr, J. 159 (1989) 93

Ledbetter, H., Lei, M. and Ramji Rao, R., Thermoelastic coefficient and its pressure derivative: derivation from a Mie–Grüneisen interatomic potential 159 (1989) 265
Lei, M., see Ledbetter, H. 159 (1989) 265
Lostak, F., Prins, K.O. and Trappeniers, N.J., The high temperature phase transition in solid mixtures of CH_4 and CD_4 at elevated pressure 159 (1989) 249

Majkrzak, C.F., Multilayer and supermirror polarizers for neutrons 159 (1989) 143

Majkrzak, C.F., see Bohr, J. 159 (1989) 93
Mancini, F., Marinaro, M. and Nakano, Y., Exact results for the Anderson model in the limit of zero-width conduction band 159 (1989) 330
Marinaro, M., see Mancini, F. 159 (1989) 330
Maślanka, R., Henkie, Z., Franse, J.J.M., Verhoef, R., Oleksy, Cz. and Przystawa, J., Magnetic field induced spin reorientation transitions in U_3Sb_4 159 (1989) 181
McGreevy, R.L. and Van der Lugt, W., Dynamics of molten Au–Cs alloys 159 (1989) 188
McWhan, D.B., see Vettier, C. 159 (1989) 106
Misra, S.K. and Wang, C., EPR of VO^{2+} in $Cd(COO)_2 \cdot 3H_2O$ single crystal: superhyperfine interaction with ligand protons 159 (1989) 321
Moncton, D.E., see Bohr, J. 159 (1989) 93
Mora-Ramos, M.E., see Comas, F. 159 (1989) 413

Nakano, Y., see Mancini, F. 159 (1989) 330

Oleksy, Cz., see Maślanka, R. 159 (1989) 181
Osborn, R., High energy magnetic inelastic neutron scattering at ISIS 159 (1989) 151

Passeggi, M.C.G., see Albanesi, E.A. 159 (1989) 289
Pasturel, A., see Colinet, C. 159 (1989) 275
Pivovarov, A.N., see Borman, V.D. 159 (1989) 402
Prins, K.O., see Lostak, F. 159 (1989) 249
Przystawa, J., see Maślanka, R. 159 (1989) 181
Pustovoit, M.A., see Bezrukov, S.M. 159 (1989) 388

Quezel, S., see Burlet, P. 159 (1989) 129

Radwański, R.J., De Boer, F.R., Franse, J.J.M. and Buschow, K.H.J., High-field magnetization process in ferrimagnetic $R_2Fe_{14}C$ compounds – interplay of molecular and crystal fields 159 (1989) 311
Ramji Rao, R., see Ledbetter, H. 159 (1989) 265
Rebizant, J., see Burlet, P. 159 (1989) 129
Rhyne, J.J., Erwin, R.W., Borchers, J., Salamon, M.B., Du, R. and Flynn, C.P., Neutron scattering studies of rare earth magnetic multilayers 159 (1989) 111
Rossat-Mignod, J., see Burlet, P. 159 (1989) 129

Salamon, M.B., see Rhyne, J.J. 159 (1989) 111
Shimizu, M., Relation between electronic structure and magnetic properties in transition metals 159 (1989) 26
Sibilev, A.I., see Bezrukov, S.M. 159 (1989) 388
Silin, V.P., see Zverev, V.M. 159 (1989) 43
Sinha, M.M., see Gupta, H.C. 159 (1989) 383
Sood, G., see Gupta, H.C. 159 (1989) 383
Spirlet, J.C., see Burlet, P. 159 (1989) 129
Srivastava, K.S., Tandon, A., Trivedi, M. and Fatima, N., Surface plasmon-optical phonon dipersion relation for spherical polar semiconductors 159 (1989) 295
Stankowski, J., see Kowalik, Z.J. 159 (1989) 399

Svechkarev, I.V., Effect of pressure on the magnetic susceptibility of transition metals 159 (1989) 35
Świrkowicz, R., On the influence of the surface potential on the one-electron properties and spin waves in transition metal thin films. The multi-band approach 159 (1989) 304

Tandon, A., see Srivastava, K.S. 159 (1989) 295
Trammell, G.T., see Hannon, J.P. 159 (1989) 161
Trappeniers, N.J., see Lostak, F. 159 (1989) 249
Tripathi, B.B., see Gupta, H.C. 159 (1989) 383
Trivedi, M., see Srivastava, K.S. 159 (1989) 295
Troyan, V.I., see Borman, V.D. 159 (1989) 402
Turov, E.A. and Grebennikov, V.I., The transition metal properties in the spin fluctuation theory 159 (1989) 56

Van Beelen, H., see Brocken, M.G.M. 159 (1989) 191
Van der Lugt, W., see McGreevy, R.L. 159 (1989) 188
Vasvári, B., Transport phenomena in metallic glasses 159 (1989) 79
Verhoef, R., see Maślanka, R. 159 (1989) 181
Vettier, C. and McWhan, D.B., Magnetic X-ray diffraction from ferromagnetic materials 159 (1989) 106
Vogt, O., see Burlet, P. 159 (1989) 129
Vonsovsky, S.V. and Katsnelson, M.I., Evolution of the concepts about the role of many-particle effects in transition metals, their alloys and compounds 159 (1989) 61

Wang, C., see Misra, S.K. 159 (1989) 321
Weiden, N., see Czaplicki, J. 159 (1989) 214
Weiss, A., see Czaplicki, J. 159 (1989) 214

Zverev, V.M. and Silin, V.P., Self-consistent fluctuation-phonon (SCFP) approach to the theory of magnetism 159 (1989) 43

ANALYTIC SUBJECT INDEX

Actinide systems, Np and Pu
– Neutron scattering studies of neptunium and plutonium compounds - Burlet et al. 159 (1989) 129
Activated process
– The kinetic equation for the — on the surface of a slowly relaxing solid - Borman et al. 159 (1989) 402
Anderson model
– Exact results for the — in the limit of zero-width conduction band - Mancini et al. 159 (1989) 330
Anharmonic contributions to thermodynamic properties
– Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten - Grimvall 159 (1989) 39
Anisotropic exchange
– Electron correlations in transition metals - Fulde 159 (1989) 50
– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66
Antiferromagnetism and superconductivity
– Review of high temperature superconductivity - Fenton 159 (1989) 1
APW calculations
– Magnetic Compton scattering with circularly polarised synchrotron radiation - Cooper 159 (1989) 137
Au–Cs alloys, molten
– Dynamics of molten Au–Cs alloys - McGreevy and van der Lugt 159 (1989) 188

Band structure calculations
– — for magnetic and superconducting systems - Kübler 159 (1989) 7
Bcc binary alloys (see *Transition metal alloys, binary*) 159 (1989) 275
Bifurcations (see *Rf - SQUID system*) 159 (1989) 399
Bloch's hydrodynamical model
– Surface plasmon-optical phonon dipersion relation for spherical polar semiconductors - Srivastava et al. 159 (1989) 295

Calculation of physical properties
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
CALPHAD method
– Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten - Grimvall 159 (1989) 39
$CD(COO)_2 \cdot 3H_2O$
– EPR of VO^{2+} in $Cd(COO)_2 \cdot 3H_2O$ single crystal: superhyperfine interaction with ligand protons - Misra and Wang 159 (1989) 321
CH_4–CD_4 mixtures

– The high temperature phase transition in solid mixtures of CH_4 and CD_4 at elevated pressure - Lostak et al. 159 (1989) 249
Charge fluctuations, suppression
– Electron correlations in transition metals - Fulde 159 (1989) 50
Charged-hard-sphere reference system
– On the calculation of the thermodynamics of liquid metals using the — - Iwamatsu 159 (1989) 269
Circularly-polarised radiation
– Magnetic Compton scattering with circularly polarised synchrotron radiation - Cooper 159 (1989) 137
Cobalt hexammine compounds (see $Co(NH_3)_6X_2$) 159 (1989) 214
Coherent enhancement
– Coherent excitations of nuclei in crystals by synchrotron radiation pulses - Hannon and Trammell 159 (1989) 161
Compensation of magnetic moments
– Neutron scattering studies of rare earth magnetic multilayers - Rhyne et al. 159 (1989) 111
Conductance fluctuations
– Large-scale — in solutions of strong electrolytes - Bezrukov et al. 159 (1989) 388
Conduction band electrons
– Exact results for the Anderson model in the limit of zero-width conduction band - Mancini et al. 159 (1989) 330
Conduction electrons
– The role of — on the crystal field effect in metallic systems - Albanesi and Passeggi 159 (1989) 289
$Co(NH_3)_6X_2$
– Electron spin–lattice relaxation via PMR in — type compounds - Czaplicki et al. 159 (1989) 214
Crystal field
– The role of conduction electrons on the — effect in metallic systems - Albanesi and Passeggi 159 (1989) 289
Crystal field (see U_3Sb_4) 159 (1989) 181
Crystal-fields
– High energy magnetic inelastic neutron scattering at ISIS - Osborn 159 (1989) 151
Crystal structure of $R_2Fe_{14}B$
– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66

3d-4f exchange coupling
– High-field magnetization process in ferrimagnetic $R_2Fe_{14}C$ compounds – interplay of molecular and crystal fields - Radwański et al. 159 (1989) 311
Diodes, p^+nn^+
– $1/f$ noise investigations in double-injection gated SOS structures - Dimopoulos and Chovet 159 (1989) 219
Dissipation functions for magnetization of a ferromagnet
– Crystal symmetry and the structure of the relaxation terms in the dynamic equations of motion for magnetization - Bar'yakhtar 159 (1989) 20
Dynamic equations of motion for magnetization
– Crystal symmetry and the structure of the relaxation terms in the — - Bar'yakhtar 159 (1989) 20
Dynamic screening anomalies (DSA)

– Evolution of the concepts about the role of many-particle effects in transition metals, their alloys and compounds - Vonsovsky and Katsnelson 159 (1989) 61

Elastic constants
– Thermoelastic coefficient and its pressure derivative: derivation from a Mie–Grüneisen interatomic potential - Ledbetter et al. 159 (1989) 265
Elastic constants calculation
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
Electrical conductivity; ionic, metallic
– Dynamics of molten Au–Cs alloys - McGreevy and van der Lugt 159 (1989) 188
Electrolytes, strong
– Large-scale conductance fluctuations in solutions of strong electrolytes - Bezrukov et al. 159 (1989) 388
Electron correlations at finite temperatures
– Electron correlations in transition metals - Fulde 159 (1989) 50
– Transport phenomena in metallic glasses - Vasvári 159 (1989) 79
Electron correlations in the ground state
– Electron correlations in transition metals - Fulde 159 (1989) 50
Electron–magnon scattering
– Transport phenomena in metallic glasses - Vasvári 159 (1989) 79
Electron paramagnetic resonance
– EPR of VO^{2+} in $Cd(COO)_2 \cdot 3H_2O$ single crystal: superhyperfine interaction with ligand protons - Misra and Wang 159 (1989) 321
Electron–phonon interaction and magnetism
– Self-consistent fluctuation-phonon (SCFP) approach to the theory of magnetism - Zverev and Silin 159 (1989) 43
Electron spin-lattice relaxation
– Electron spin–lattice relaxation via PMR in $Co(NH_3)_6X_2$ type compounds - Czaplicki et al. 159 (1989) 214
Electronic structure and magnetic properties
– Relation between — in transition metals - Shimizu 159 (1989) 26
Enthalpies of formation (see *Transition metal alloys, binary*) 159 (1989) 275
Entropy Debye temperature
– Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten - Grimvall 159 (1989) 39
Equation of motion in the exchange approximation
– Crystal symmetry and the structure of the relaxation terms in the dynamic equations of motion for magnetization - Bar'yakhtar 159 (1989) 20
Exchange interactions (see U_3Sb_4) 159 (1989) 181
Excited states of nuclei
– Coherent excitations of nuclei in crystals by synchrotron radiation pulses - Hannon and Trammell 159 (1989) 161

1/f noise
– — investigations in double-injection gated SOS structures - Dimopoulos and Chovet 159 (1989) 219
Fe, iron

– Magnetic Compton scattering with circularly polarised synchrotron radiation - Cooper 159 (1989) 137
Ferrimagnetism (see $R_2Fe_{14}C$ *compounds*) 159 (1989) 311
Ferromagnetic Hall effect
– The transition metal properties in the spin fluctuation theory - Turov and Grebennikov 159 (1989) 56
Fluctuation phenomena (see *Conductance fluctuations*) 159 (1989) 388
Fokker–Planck equations (see *Kinetic equations*) 159 (1989) 402

Gd, gadolinium
– Magnetic X-ray diffraction from ferromagnetic materials - Vettier and McWhan 159 (1989) 106
GeS, germanium sulphide
– Optical constants of germanium sulphide single crystal by interference method - Elkorashy 159 (1989) 171
Gibbs free energy calculation
– Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten - Grimvall 159 (1989) 39

Half-metallic magnets
– Band structure calculations for magnetic and superconducting systems - Kübler 159 (1989) 7
^{4}He-films, unsaturated
– The use of isothermal third sound oscillators for the study of ^{4}He films - Brocken and van Beelen 159 (1989) 191
Heusler alloys
– Band structure calculations for magnetic and superconducting systems - Kübler 159 (1989) 7
$HfS_{2-x}Te_x$
– Two-mode behaviour in mixed layer crystals $HfS_{2-x}Te_x (0 \leqslant x \leqslant 2)$ - Gupta et al. 159 (1989) 383
High field magnetization process
– High-field magnetization process in ferrimagnetic $R_2Fe_{14}C$ compounds – interplay of molecular and crystal fields - Radwański et al. 159 (1989) 311
High temperature superconductivity
– Review of — - Fenton 159 (1989) 1
– Band structure calculations for magnetic and superconducting systems - Kübler 159 (1989) 7
Ho, holmium
– Polarization analysis of magnetic X-ray scattering - Gibbs 159 (1989) 145
Hubbard's model
– Effect of pressure on the magnetic susceptibility of transition metals - Svechkarev 159 (1989) 35
Hund's-rule correlations
– Electron correlations in transition metals - Fulde 159 (1989) 50
Hyperfine fields in $R_2Fe_{14}B$
– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66

Intermultiplet transitions
– High energy magnetic inelastic neutron scattering at ISIS - Osborn 159 (1989) 151
Invar alloy
– Self-consistent fluctuation-phonon (SCFP) approach to the theory of magnetism - Zverev and Silin 159 (1989) 43
Iron, calculation of thermodynamic properties

– Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten - Grimvall 159 (1989) 39
Itinerant electron model
– On the influence of the surface potential on the one-electron properties and spin waves in transition metal thin films. The multi-band approach - Świrkowicz 159 (1989) 304

Jahn-Teller antiferrodistortive orbital ordering
– Band structure calculations for magnetic and superconducting systems - Kübler 159 (1989) 7
Josephson junction
– On the thermodynamics of a superconducting ring interrupted by a weak superconducting junction II (continuation) - de Bruyn Ouboter and de Wolff 159 (1989) 234

Kinetic equations
– The kinetic equation for the activated process on the surface of a slowly relaxing solid - Borman et al. 159 (1989) 402
Kinetic equations (see *Photo desorption*) 159 (1989) 361
Kondo lattice
– Review of high temperature superconductivity - Fenton 159 (1989) 1

Liquid metals
– On the calculation of the thermodynamics of — using the charged-hard-sphere reference system - Iwamatsu 159 (1989) 269
Local density approximation (LDA)
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
– Effect of pressure on the magnetic susceptibility of transition metals - Svechkarev 159 (1989) 35
– Evolution of the concepts about the role of many-particle effects in transition metals, their alloys and compounds - Vonsovsky and Katsnelson 159 (1989) 61
Local spin-density-functional theory (LSDF or LSDA)
– Band structure calculations for magnetic and superconducting systems - Kübler 159 (1989) 7
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
Local spin fluctuation theory
– The transition metal properties in the spin fluctuation theory - Turov and Grebennikov 159 (1989) 56
Localisation effects
– Transport phenomena in metallic glasses - Vasvári 159 (1989) 79
Localized electrons (see *Anderson model*) 159 (1989) 330

Magnetic coherence range (see *Magnetic ordering*) 159 (1989) 111
Magnetic Compton scattering
– — with circularly polarised synchrotron radiation - Cooper 159 (1989) 137
Magnetic contributions to thermophysical properties
– Magnetic Grüneisen parameters in 3d transition metals - Fawcett 159 (1989) 12
Magnetic correlations
– Neutron scattering studies of neptunium and plutonium compounds - Burlet et al. 159 (1989) 129
Magnetic field effects on transport phenomena

– Transport phenomena in metallic glasses - Vasvári 159 (1989) 79
Magnetic Grüneisen parameters
– — in 3d transition metals - Fawcett 159 (1989) 12
Magnetic ordering
– Neutron scattering studies of rare earth magnetic multilayers - Rhyne et al. 159 (1989) 111
Magnetic scattering and X-rays (see *X-ray and neutron scattering*) 159 (1989) 93
Magnetic scattering of X-rays (see *X-ray scattering*) 159 (1989) 106
Magnetic scattering of X-rays (see *X-ray scattering*) 159 (1989) 145
Magnetic structures
– Neutron scattering studies of neptunium and plutonium compounds - Burlet et al. 159 (1989) 129
Magnetization curves (see U_3Sb_4) 159 (1989) 181
Magnetocrystalline anisotropy
– High-field magnetization process in ferrimagnetic $R_2Fe_{14}C$ compounds – interplay of molecular and crystal fields - Radwański et al. 159 (1989) 311
Magnetocrystalline anisotropy of $R_2Fe_{14}B$
– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66
Magnetovolume effect
– High-field magnetization process in ferrimagnetic $R_2Fe_{14}C$ compounds – interplay of molecular and crystal fields - Radwański et al. 159 (1989) 311
Magnetovolume effects
– Magnetic Grüneisen parameters in 3d transition metals - Fawcett 159 (1989) 12
– Electron correlations in transition metals - Fulde 159 (1989) 50
Many-particle effects, evolution of concepts
– Evolution of the concepts about the role of many-particle effects in transition metals, their alloys and compounds - Vonsovsky and Katsnelson 159 (1989) 61
Metallic glasses
– Transport phenomena in — - Vasvári 159 (1989) 79
Mie–Grüneisen interatomic potential
– Thermoelastic coefficient and its pressure derivative: derivation from a — - Ledbetter et al. 159 (1989) 265
Mixed layer crystals
– Two-mode behaviour in — $HfS_{2-x}Te_x (0 \leqslant x \leqslant 2)$ - Gupta et al. 159 (1989) 383
Mobility noise (see *1/f noise*) 159 (1989) 219
Molecular vibrations, dephasing
– Generalized master equation for photodesorption by resonant IR laser–adsorbate vibrational coupling - Fain and Gortel 159 (1989) 361
Molten Au–Cs alloys (see *Au–Cs alloys, molten*) 159 (1989) 188
Mössbauer effect
– Coherent excitations of nuclei in crystals by synchrotron radiation pulses - Hannon and Trammell 159 (1989) 161
Mössbauer spectra of $R_2Fe_{14}B$
– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66
Multiband model
– On the influence of the surface potential on the one-electron properties and spin waves in transition metal thin films. The multi-band approach - Świrkowicz 159 (1989) 304

Neutron scattering
– — studies of neptunium and plutonium compounds - Burlet et al. 159 (1989) 129
– Multilayer and supermirror polarizers for neutrons - Majkrzak 159 (1989) 143
– High energy magnetic inelastic — at ISIS - Osborn 159 (1989) 151
– Dynamics of molten Au–Cs alloys - McGreevy and van der Lugt 159 (1989) 188
Non-collinear magnetic systems
– Band structure calculations for magnetic and superconducting systems - Kübler 159 (1989) 7
Nonlinear dissipative structures
– The bifurcations in the rf-SQUID system - Kowalik and Stankowski 159 (1989) 399

One-component-plasma reference system
– On the calculation of the thermodynamics of liquid metals using the charged-hard-sphere reference system - Iwamatsu 159 (1989) 269
One-electron properties (see *Transition metal thin films*) 159 (1989) 304
Onsager kinetic equations
– Crystal symmetry and the structure of the relaxation terms in the dynamic equations of motion for magnetization - Bar'yakhtar 159 (1989) 20
Optical constants (see *GeS, germanium sulphide*) 159 (1989) 171
Orientational phase transition (see *Phase transition*) 159 (1989) 249

Pair interactions (see *Transition metal alloys, binary*) 159 (1989) 275
Paramagnetic susceptibility, temperature variation
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
Paramagnetostriction
– Magnetic Grüneisen parameters in 3d transition metals - Fawcett 159 (1989) 12
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
Phase transition
– On the gapless superfluidity in ^{3}He films - Harań et al. 159 (1989) 223
– The high temperature — in solid mixtures of CH_4 and CD_4 at elevated pressure - Lostak et al. 159 (1989) 249
Phonon frequencies (see $HfS_{2-x}Te_x$) 159 (1989) 383
Photo desorption
– Generalized master equation for photodesorption by resonant IR laser–adsorbate vibrational coupling - Fain and Gortel 159 (1989) 361
Plasmon-phonon dispersion
– Surface plasmon-optical phonon dipersion relation for spherical polar semiconductors - Srivastava et al. 159 (1989) 295
Polarisation analysis
– Magnetic X-ray diffraction from ferromagnetic materials - Vettier and McWhan 159 (1989) 106
Polarisation analysis of synchrotron radiation
– Polarization analysis of magnetic X-ray scattering - Gibbs 159 (1989) 145
Polarised neutrons
– Multilayer and supermirror polarizers for neutrons - Majkrzak 159 (1989) 143
Pr, praeseodymium
– High energy magnetic inelastic neutron scattering at ISIS - Osborn 159 (1989) 151
Pressure dependence of magnetic ordering temperature

– Magnetic Grüneisen parameters in 3d transition metals - Fawcett 159 (1989) 12

Pressure dependence of magnetic susceptibility

– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26

Pressure effects on magnetic susceptibility

– Effect of pressure on the magnetic susceptibility of transition metals - Svechkarev 159 (1989) 35

Proton magnetic resonance

– Electron spin–lattice relaxation via PMR in $Co(NH_3)_6X_2$ type compounds - Czaplicki et al. 159 (1989) 214

Proton spin-lattice relaxation

– The high temperature phase transition in solid mixtures of CH_4 and CD_4 at elevated pressure - Lostak et al. 159 (1989) 249

Quantum interference effects

– Transport phenomena in metallic glasses - Vasvári 159 (1989) 79

– Coherent excitations of nuclei in crystals by synchrotron radiation pulses - Hannon and Trammell 159 (1989) 161

Rare earth ions, diluted

– The role of conduction electrons on the crystal field effect in metallic systems - Albanesi and Passeggi 159 (1989) 289

Rare-earth metals

– Diffraction studies of rare earth metals and superlattices - Bohr et al. 159 (1989) 93

Rare earth–transition metal (R–T) intermetallics

– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66

Refractive index measurements, interference method

– Optical constants of germanium sulphide single crystal by interference method - Elkorashy 159 (1989) 171

Relativistic correction to magnetic equations of motion

– Crystal symmetry and the structure of the relaxation terms in the dynamic equations of motion for magnetization - Bar'yakhtar 159 (1989) 20

Relaxing solids, slowly

– The kinetic equation for the activated process on the surface of a slowly relaxing solid - Borman et al. 159 (1989) 402

Reorientation phenomena in $R_2Fe_{14}B$

– R–T intermetallics as seen by Mössbauer spectroscopy - Krop 159 (1989) 66

Resonant laser-adsorbate vibrational coupling

– Generalized master equation for photodesorption by resonant IR laser–adsorbate vibrational coupling - Fain and Gortel 159 (1989) 361

Resonating-valence-bond state (RVB)

– Review of high temperature superconductivity - Fenton 159 (1989) 1

Rf - SQUID system

– The bifurcations in the rf-SQUID system - Kowalik and Stankowski 159 (1989) 399

$R_2Fe_{14}C$ compounds

– High-field magnetization process in ferrimagnetic — – interplay of molecular and crystal fields - Radwański et al. 159 (1989) 311

Self-consistent fluctuation-phonon (SCFP) theory
– Self-consistent fluctuation-phonon (SCFP) approach to the theory of magnetism - Zverev and Silin 159 (1989) 43
Semi conductors
– Optical constants of germanium sulphide single crystal by interference method - Elkorashy 159 (1989) 171
Semiconductors; spherical, polar
– Surface plasmon-optical phonon dipersion relation for spherical polar semiconductors - Srivastava et al. 159 (1989) 295
Silicon-on-sapphire devices
– $1/f$ noise investigations in double-injection gated SOS structures - Dimopoulos and Chovet 159 (1989) 219
Spin and orbital moments, separation of
– Polarization analysis of magnetic X-ray scattering - Gibbs 159 (1989) 145
Spin correlations
– Electron correlations in transition metals - Fulde 159 (1989) 50
Spin-density fluctuations
– The transition metal properties in the spin fluctuation theory - Turov and Grebennikov 159 (1989) 56
Spin-density wave (SDW)
– Review of high temperature superconductivity - Fenton 159 (1989) 1
Spin fluctuations
– Relation between electronic structure and magnetic properties in transition metals - Shimizu 159 (1989) 26
Spin reorientation transitions
– Magnetic field induced — in U_3Sb_4 - Maślanka et al. 159 (1989) 181
Spin-slip model
– Diffraction studies of rare earth metals and superlattices - Bohr et al. 159 (1989) 93
SQUID ring (see *Thermodynamics of a SQUID ring*) 159 (1989) 234
Stress;active, residual
– Thermoelastic coefficient and its pressure derivative: derivation from a Mie–Grüneisen interatomic potential - Ledbetter et al. 159 (1989) 265
Strong electrolytes, solutions of (see *Electrolytes, strong*) 159 (1989) 388
Superconducting junction
– On the thermodynamics of a superconducting ring interrupted by a weak superconducting junction II (continuation) - de Bruyn Ouboter and de Wolff 159 (1989) 234
Superfluidity, areal superfluid density
– The use of isothermal third sound oscillators for the study of ^{4}He films - Brocken and van Beelen 159 (1989) 191
Superfluidity, gapless (see *^{3}He films*) 159 (1989) 223
Superhyperfine interactions
– EPR of VO^{2+} in $Cd(COO)_2 \cdot 3H_2O$ single crystal: superhyperfine interaction with ligand protons - Misra and Wang 159 (1989) 321
Superlattices and multilayers
– Diffraction studies of rare earth metals and superlattices - Bohr et al. 159 (1989) 93
– Magnetic X-ray diffraction from ferromagnetic materials - Vettier and McWhan 159 (1989) 106
– Neutron scattering studies of rare earth magnetic multilayers - Rhyne et al. 159 (1989) 111

Supermirrors
– Multilayer and supermirror polarizers for neutrons - Majkrzak 159 (1989) 143
Surface spin waves (see *Transition metal thin films*) 159 (1989) 304
Surface waves (see *Plasmon-phonon dispersion*) 159 (1989) 295
Synchrotron radiation
– Coherent excitations of nuclei in crystals by — pulses - Hannon and Trammell 159 (1989) 161

Thermo field dynamics
– Exact results for the Anderson model in the limit of zero-width conduction band - Mancini et al. 159 (1989) 330
Thermodynamics
– Magnetic Grüneisen parameters in 3d transition metals - Fawcett 159 (1989) 12
– Ab initio and empirical approaches to the — of transition metals, with an application to tungsten - Grimvall 159 (1989) 39
– The transition metal properties in the spin fluctuation theory - Turov and Grebennikov 159 (1989) 56
Thermodynamics of a SQUID ring
– On the thermodynamics of a superconducting ring interrupted by a weak superconducting junction II (continuation) - de Bruyn Ouboter and de Wolff 159 (1989) 234
Thermodynamics (see *Liquid metals*) 159 (1989) 269
Thermoelastic coefficient
– — and its pressure derivative: derivation from a Mie–Grüneisen interatomic potential - Ledbetter et al. 159 (1989) 265
Third-sound oscillations, isothermal
– The use of isothermal third sound oscillators for the study of ^{4}He films - Brocken and van Beelen 159 (1989) 191

^{3}He films
– On the gapless superfluidity in — - Harań et al. 159 (1989) 223

Transition curve (see *Phase transition*) 159 (1989) 223
Transition metal alloys, binary
– Effective pair interactions and order in bcc binary transition metal alloys - Colinet and Pasturel 159 (1989) 275
Transition metal thin films
– On the influence of the surface potential on the one-electron properties and spin waves in transition metal thin films. The multi-band approach - Świrkowicz 159 (1989) 304
Transition metals
– Effect of pressure on the magnetic susceptibility of — - Svechkarev 159 (1989) 35
Transport phenomena
– The transition metal properties in the spin fluctuation theory - Turov and Grebennikov 159 (1989) 56
– — in metallic glasses - Vasvári 159 (1989) 79
Tungsten, calculation of thermodynamic properties
– Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten - Grimvall 159 (1989) 39
Two mode behaviour (see $HfS_{2-x}Te_x$) 159 (1989) 383

UO_2, uranium dioxide
– High energy magnetic inelastic neutron scattering at ISIS - Osborn 159 (1989) 151
U_3Sb_4
– Magnetic field induced spin reorientation transitions in — - Maślanka et al. 159 (1989) 181

Van der Waals forces, He on glass
– The use of isothermal third sound oscillators for the study of ^{4}He films - Brocken and van Beelen 159 (1989) 191
VO^{2+}; vanadyl ion
– EPR of VO^{2+} in $Cd(COO)_2 \cdot 3H_2O$ single crystal: superhyperfine interaction with ligand protons - Misra and Wang 159 (1989) 321

X-ray and neutron scattering
– Diffraction studies of rare earth metals and superlattices - Bohr et al. 159 (1989) 93
X-ray scattering
– Magnetic X-ray diffraction from ferromagnetic materials - Vettier and McWhan 159 (1989) 106
– Polarization analysis of magnetic — - Gibbs 159 (1989) 145